

Serial No. 09/824,708

Amendments to the Claims

The following is a listing of all claims presently pending in the present application.

1. (Original) A pressure sensor comprising:  
a case having an environmental pressure introduction port;  
a sensor element unit disposed in the case for detecting a pressure based on an environmental pressure introduced into the case through the environmental pressure introduction port; and  
a filter attached to the environmental pressure introduction port so that the environmental pressure enters the case after passing through the filter, the filter having a filter surface that is positioned along a gravitational direction when the pressure sensor is used.
  
2. (Previously Presented) A pressure sensor comprising:  
a case having an environmental pressure introduction port;  
a sensor element unit disposed in the case for detecting a pressure based on an environmental pressure introduced into the case through the environmental pressure introduction port; and  
a filter attached to the environmental pressure introduction port so that the environmental pressure enters the case after passing through the filter, the filter having a filter surface that is positioned along a gravitational direction when the pressure sensor is used,  
wherein the filter surface of the filter has a convex shape protruding to an outside of the case.
  
3. (Previously Presented) A pressure sensor comprising:  
a case having an environmental pressure introduction port;  
a sensor element unit disposed in the case for detecting a pressure based on an environmental pressure introduced into the case through the environmental pressure introduction port; and  
a filter attached to the environmental pressure introduction port so that the environmental pressure enters the case after passing through the filter, the filter having a filter surface that is positioned along a gravitational direction when the pressure sensor is used,

Serial N . 09/824,708

wherein the environmental pressure introduction port is composed of a plurality of opening portions that are divided by a frame.

4. (Original) The pressure sensor according to claim 3, wherein each of the plurality of opening portions has an elongated shape with a longitudinal direction approximately parallel to the gravitational direction.

5. (Original) The pressure sensor according to claim 3, wherein:  
the frame has a protrusion protruding outward from the case; and  
the filter is disposed in contact with a distal end of the protrusion to have the filter surface that is convex and to define a gap portion between the frame and the filter for conducting the environmental pressure into the case.

6. (Previously Presented) A pressure sensor comprising:  
a case having an environmental pressure introduction port;  
a sensor element unit disposed in the case for detecting a pressure based on an environmental pressure introduced into the case through the environmental pressure introduction port; and

a filter attached to the environmental pressure introduction port so that the environmental pressure enters the case after passing through the filter, the filter having a filter surface that is positioned along a gravitational direction when the pressure sensor is used,  
wherein the environmental pressure introduction port has an opening area equal to or larger than 90 mm<sup>2</sup>.

7. (Previously Presented) A pressure sensor comprising:  
a case having an environmental pressure introduction port;  
a sensor element unit disposed in the case for detecting a pressure based on an environmental pressure introduced into the case through the environmental pressure introduction port; and  
a filter attached to the environmental pressure introduction portion so that the environmental pressure is introduced into the case after passing through the filter, wherein:

Serial No. 09/824,708

the environmental pressure introduction port is divided into a plurality of opening portions that are covered with the filter.

8. (Original) The pressure sensor according to claim 7, further comprising a frame dividing the environmental pressure introduction port into the plurality of opening portions.

9. (Original) The pressure sensor according to claim 8, wherein:  
the frame has a protrusion protruding outwardly from the case; and  
the filter is disposed in contact with a distal end of the protrusion to provide a gap portion between the filter and the frame for introducing the environmental pressure into the case.

10. (Original) The pressure sensor according to claim 9, wherein:  
the environmental pressure introduction port is open in an approximately horizontal direction; and

the filter disposed in contact with the distal end of the protrusion has a filter surface that is curved and extends approximately in parallel with a vertical direction.

11. (Original) The pressure sensor according to claim 9, wherein:  
the frame has first and second protrusions protruding outwardly from the case and arranged in a gravitational direction;  
the first protrusion arranged at an upper side of the second protrusion has a protruding height larger than that of the second protrusion; and  
the filter is disposed in contact with both first and second distal ends of the first and second protrusions to have a curved filter surface.

Serial No. 09/824,708

12. (Previously Presented) A pressure sensor comprising:

a case having a measurement pressure introduction passage extending in a vertical direction for introducing a measurement pressure and an environmental pressure introduction passage extending in a horizontal direction and having an environmental pressure introduction port that is open in the horizontal direction for introducing an environmental pressure;

a sensor element disposed in the case for detecting the measurement pressure based on the environmental pressure; and

a filter covering the environmental pressure introduction port.

13. (Previously Presented) The pressure sensor according to claim 12, wherein the filter has a filter surface extending in a direction that forms a specific angle with the vertical direction, the specific angle falling in a range of 0 to 45°.

14. (Original) The pressure sensor according to claim 12, wherein the filter has a convex filter surface protruding outward from the case in the horizontal direction.